onto incumbent LECs, particularly as AT&T/WorldCom fail to include corresponding costs in their recurring cost study.

Many of the instances in which AT&T/WorldCom argue that a non-recurring charge is inappropriate are cases in which the associated cost is order-specific and thus falls precisely into the non-recurring category as defined by the Commission. For example, AT&T/WorldCom cite database correction as a context in which they believe such a charge should not be levied.[55/] But these costs arise in the context of specific CLEC orders. When Verizon VA discovers an error in its database in the course of responding to such an order, Verizon VA will work to correct the immediate problem with the objective of moving the order forward. Action of this sort typically involves correcting only information *in the order*, not information in the database. In the rare situation in which a problem results from an underlying database deficiency, the MLAC will document the problem and refer it for corrective action to the database administration group. Costs resulting from the MLAC's efforts to correct the errors are charged, *if at all*, on a recurring basis, as the CLECs contend they should be. Thus, the situation that AT&T/WorldCom envision, in which Verizon VA resolves fallout in a way that benefits other CLECs or Verizon itself, but charges the ordering CLEC for such resolution on a non-recurring basis, will almost never arise.

55/ *See, e.g.*, AT&T/WorldCom NRC Rebuttal Panel at 157.

Q. AT&T/WorldCom suggest that Verizon VA included capital equipment costs in its non-recurring charges and point to the example of an ISDN repeater. [AT&T/WorldCom NRC Rebuttal Panel at 20-21.] What is your response?

A. AT&T/WorldCom's testimony is extremely misleading on this point: they imply that the one example they cite is somehow representative of a broader issue, but the fact is that just about the *only* case in which a "capital equipment" cost is included in Verizon VA's NRCM is extension equipment used in connection with the limited service offering of ISDN. The costs associated with that equipment are assessed to CLECs on a non-recurring basis because full cost recovery would be extremely unlikely otherwise. The equipment is not part of the loop element, but instead is tied to a particular service. When the ordering CLEC chooses to terminate that service, Verizon VA cannot simply leave the equipment in place for reuse by another carrier, especially since this service has relatively low demand. The ordering CLEC should bear the cost of its unusual equipment needs. Indeed, the Commission has agreed, noting that "[t]o the extent that the equipment needed for expanded interconnection service is dedicated to a particular interconnector, [it] believe[s] that requiring the interconnector to pay the full cost of the equipment up front is reasonable . . . regardless of whether the equipment might be reusable."[56/] If those costs were collected on a recurring basis, whether or not Verizon VA recovered for its expenditure would be determined by the fortuity of how long the CLEC kept the service connected — that is, whether the service remained in place long enough for Verizon VA to cover its costs through recurring charges.

56/ Second Report and Order, *Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection through Physical Collocation for Special Access and Switched Transport*, CC Docket No. 93-162, at ¶ 33 (June 13, 1997) ("Second Report and Order").

Moreover, AT&T/WorldCom's complaint that "Verizon's proposed charge of $1,758.58 [for copper extension electronics] would effectively close off all competition for ISDN over longer loops entirely"[57] is wrong. Verizon VA must incur the same costs as the CLECs wishing to provide this service, and the CLECs have as many choices as Verizon VA regarding how they should recover those costs from end users. Thus, imposing this real cost on the CLECs creates competitive *parity*. Basic economic principles suggest that if the cost of the service exceeds the value placed on it by end users, and thus the price customers are willing to pay, the service simply should not be consumed.

Q. Do you agree that there should not be a non-recurring charge for placement of a cross-connect at the serving area interface or field distribution interface? [AT&T/WorldCom NRC Rebuttal Panel at 22-23.]

A. No. AT&T/WorldCom's argument appears to be premised on the notion that such cross-connects are placed at the time of construction and then never disconnected (*i.e.*, 100% Dedicated Outside Plant).[58] However, as discussed in detail in our rebuttal, 100% DOP is not an efficient practice, and AT&T/WorldCom have admitted it is nothing more than a "modeling convention."[59] To be sure, when Verizon VA disconnects a service, it will attempt to leave the cross-connect in place in case it later needs to establish service for

[57] AT&T/WorldCom NRC Rebuttal Panel at 21.

[58] *See* AT&T/WorldCom NRC Rebuttal Panel at 22 (noting that cross-connects "are 'left-in-place' when services disconnect, to support new incoming request [*sic*]").

[59] VZ-VA NRC Panel Rebuttal at 39-45.

another user. For example, if one end user moves out of a residence, it is likely that the new occupant will wish to commence service. However, particularly if the cross-connect remains dormant for an extended period of time, it will be disconnected if needed in connection with another service request. If a CLEC (or, for that matter, a Verizon retail customer) subsequently orders service for a premises where a cross-connect is no longer in place, placing a new cross-connect is part of fulfilling that order.

The Typical Occurrence Factor applied to the placement of cross-connects in Verizon VA's model accounts for the proportion of cases in which no such placement will be required. Thus, the non-recurring cost of the placement of a cross-connect is adjusted to account for the likelihood that no new cross-connect will be necessary.

Q. Is it the case that "[t]he Verizon Field Installation activities are necessary to produce the loop element," and that the cost of those activities therefore "is properly recovered as recurring cost activities"? [AT&T/WorldCom NRC Rebuttal Panel at 24-25.]

A. AT&T and WorldCom miss the distinction between construction of loop facilities and provisioning of loop facilities. Verizon VA recovers the cost to "produce the loop element" — that is, to *construct* the loop facilities — in its recurring costs. While this loop is in the field and ready to serve, it may not be connected specifically to the particular premises to which the CLEC has ordered service.

As part of the *provisioning* process, Verizon VA field dispatches are triggered by particular CLEC orders. When an order is placed, the Verizon VA technician will perform the work required — and only the work required — to provision that specific order to the premises requested. This is therefore a classic event-driven expenditure that is directly caused by the CLEC. Such expenses, as described above, are properly charged on a non-recurring basis.

Moreover, the AT&T/WorldCom panel's reference to the FCC's Local Competition Order[60/] does not even speak to this point, given that the quoted portion nowhere addresses the distinction between recurring and non-recurring costs.

Q. Do you agree that the "work effort completed by Field Installation will not be undone when the UNEs are disconnected," and that this cost is thus not properly recovered on a non-recurring basis? [AT&T/WorldCom NRC Rebuttal Panel at 25.]

A. This charge accounts for the order-specific *work* that is performed to respond to a specific request, and is thus properly recovered through a non-recurring charge. In almost all cases, except as described above, the costs of any *facilities* placed to provision an order are recovered on a recurring basis.

60/ AT&T/WorldCom NRC Rebuttal Panel at 24 n.17.

Q. Are AT&T/WorldCom correct in arguing that expenses associated with the plant accounts, which encompass "activities necessary to produce the elements that Verizon intends to lease to competitors," should be recouped as recurring costs? [AT&T/WorldCom NRC Rebuttal Panel at 23-24.]

A. We are not sure what AT&T/WorldCom's point here is. We agree that "[t]he activities necessary to produce the elements that Verizon intends to lease to competitors are in fact recurring cost activities."[61/] However, these expenses are *not* included in Verizon VA's non-recurring costs. If, for example, Verizon VA leases an access line to provision a CLEC request, Verizon VA will recover capital costs, repair costs, ongoing administrative expenses, and allocation of overhead on a recurring basis.

Verizon does not "believe that by removing . . . costs from its recurring cost studies, it has transformed the costs into non-recurring costs."[62/] Rather, this step is taken to ensure that there is no double-counting of costs as both recurring and non-recurring. As described in this testimony and in Verizon VA's direct panel testimony on non-recurring costs, Verizon VA has distinguished between recurring and non-recurring charges on a principled basis using the same cost-causation standard long employed by this Commission.[63/]

61/ AT&T/WorldCom NRC Rebuttal Panel at 24.

62/ *Id.*

63/ *See Local Competition Order* at 15499, 15874 ¶ 751 (1996).

Q. Is the Field Installation charge for switching customers on IDLC to UDLC or copper before migration to a CLEC "improper[]"? [AT&T/WorldCom NRC Rebuttal Panel at 25.]

A. No. As explained in extensive detail above, this is the only way to provide unbundled stand-alone loops at the present time.

Q. AT&T/WorldCom suggest that Verizon VA's NRCM includes Field Installation tasks that are not required for every request and "are not consistent with the way Field Installation technicians are dispatched for retail services." Is this correct? [AT&T/WorldCom NRC Rebuttal Panel at 25.]

A. No. First, Verizon VA only bills for a field dispatch *when a dispatch actually occurs.* The Occurrence Factor is 100%, but this is because, when such a dispatch *does* occur, Verizon VA will *always* incur a travel cost for which the CLEC is appropriately charged. When a field dispatch is not needed, no charge is applied.

Second, there is a good reason why tasks assumed for wholesale service might differ in some cases from those performed to provision retail service. For example, technicians engaged in retail work are dispatched to perform premises wiring work (work on customer wiring). Verizon VA does not offer premise wiring services to wholesale customers such as CLECs. Conversely, retail customers rarely, if ever, request Verizon VA dispatch solely to tag loops in the NID. Thus, the services delivered in each context are not entirely consistent, and the NRCM cannot be expected to be totally consistent with retail practices.

Q. Please respond to the example that AT&T/WorldCom offer as a demonstration of the "problems" associated with the Field Installation work group. [AT&T/WorldCom Rebuttal Panel at 25-29.]

A. The AT&T/WorldCom "analysis" is riddled with flawed assumptions that undermine its credibility. First, AT&T/WorldCom improperly minimize the extent of the travel in which the Verizon VA Field Installation technician will need to engage in order to provision the loop element. For example, they suggest that the technician may need to visit only "the FDI cross-box," "the drop wire terminal location," *or* the "NID or Premises location." In fact, however, the technician may well need to visit all three. A technician will, in most cases, first visit the premises to announce his or her presence to the end user. The NID is typically located at or very near the premises. A technician will then go to the NID and place tone on the distribution pair (using a portable test set) so that it may be easily located at the FDI. Next, the technician will visit the FDI to locate dial tone on the feeder pair, test that tone on the distribution pair, and place a cross-connect between the two. The technician will next revisit the location of the NID to ensure that dial tone is, in fact, present. Finally, the technician will visit the premises again to notify the end-user customer that service has been installed. Moreover, as described above, this process may well be complicated if the technician encounters any roadblocks requiring resolution.

AT&T/WorldCom also criticize Field Installation task #4. First, they suggest that this task and Field Installation task #2 may somehow be redundant. These tasks,

however, are distinct: Task #2 includes the time it takes a technician to travel from his or her last job, or from the garage location, to the first stop *at or near the end-user premises.* This task also includes the time it takes to deploy any necessary work area protection equipment (for example, safety cones). Field Task #4, in contrast, provides for travel from the premises to *the FDI* and back, and includes the appropriate removal and/or replacement of necessary work area protection equipment *there*. Travel to, and work at, the end-user premises is distinct from travel to, and work at, the FDI. AT&T/WorldCom also contend that the 16.36 minutes allocated to task #4 "seems unreasonable." But one must consider that cable distances from the FDI to the end user's premises can reach 18,000 feet, or 3.3 miles. Travel *to and from* the FDI thus takes time, and Verizon's 16.36-minute estimate is not at all "unreasonable."

Second, AT&T/WorldCom minimize the extent of the work that the Field Technician will often need to perform. For example, AT&T/WorldCom routinely ignore the significant impact that unexpected roadblocks can have on the time it takes to perform a task. For example, they complain that Verizon VA requires, on average, 20.76 minutes to "Verify that TC dial tone is present on assigned facility." But here, as elsewhere, AT&T and WorldCom have assumed that all cases will go smoothly, and that the Field Installation technicians therefore will not need to spend any time resolving roadblocks. Of course, in some cases, they will need to take this extra time, and Verizon VA's NRCM must account for those cases, as well.

Third, AT&T and WorldCom also repeatedly suggest that activities occasioned by particular orders — for example, "a pair swap away from defective plant" or "re-arrangement of plant" — should be counted as recurring costs. But as explained in detail above, and in the testimony of Drs. Shelanski and Tardiff, sound economic analysis demands that such costs be charged on a non-recurring basis.

Finally, throughout their testimony, AT&T/WorldCom repeatedly fail to discount work time estimates to account for the Typical Occurrence Factor and the Forward-Looking Adjustment Factor. For example, they criticize Field Installation task #7 on the basis that Verizon VA's NRCM assumes that it will take 43.32 minutes for a technician to "contact[] the CO Frame and/or the RCCC to accomplish the change of assignment." But in fact, the NRCM applies only a 10% occurrence factor to this time, and thus, for each order, the relevant charge reflects only 4.33 minutes' worth of work time.

Q. How do you respond to AT&T/WorldCom's charge that Verizon VA's NRCM includes costs related to the upkeep and operation of the Verizon VA network, including plant repair and maintenance and the updating of databases? [AT&T/WorldCom NRC Rebuttal Panel at 29.]

A. AT&T/WorldCom have failed to account for a crucial distinction between expenses that are driven entirely by a CLEC request and those that are truly classified as "upkeep and operation" expenses. Take, for example, the distinction between database corrections that result entirely from a particular CLEC order and standard Verizon VA database maintenance activities. Verizon VA agrees that when it performs routine database

maintenance, and that maintenance results in a correction, that activity is properly charged on a recurring basis. However, on other occasions, Verizon VA will discover a database mismatch during its attempt to process an order. As noted above, in cases like this, Verizon VA typically will correct the information on the order, not the information in the database. The charges for these event-driven corrections are properly billed on a nonrecurring basis.

Q. AT&T/WorldCom criticize Verizon VA's inclusion of a non-recurring charge for verification of information in the OSS and the RCCC, noting that errors in Verizon VA's database are not caused by the CLEC. [AT&T/WorldCom NRC Rebuttal Panel at 62.] Please respond.

A. Again, AT&T/WorldCom have employed a stunted conception of "causation" designed to narrow the charges for which an ordering CLEC should be held responsible. The appropriate question is not whether the CLEC has "caused" the errors that result in the need for verification, but rather whether the CLEC's order is responsible for the verification. Absent a CLEC order, Verizon VA would not be engaging in this verification. Thus, inclusion of the non-recurring cost associated with verification is appropriate here. To the extent a correction in Verizon VA's database is necessary, the cost for that correction would be charged on a recurring basis.

B. Verizon VA's Collection of Disconnection Costs at Connection Is Appropriate.

Q. What is Verizon VA's rationale for collecting disconnect costs at the time of connection?

A. Every UNE arrangement that is connected will one day be disconnected. Thus, it is appropriate for Verizon VA to include forward-looking disconnect costs in its NRC model. Indeed, such a practice is routine in connection with retail services. Inclusion of these costs is the only way to ensure that disconnect costs are attributed to the entity that causes them and that these costs will, in fact, be recovered.

Q. Does Verizon VA's collection of disconnect costs at the time of connection violate cost-causation principles, as AT&T/WorldCom allege? [AT&T/WorldCom NRC Rebuttal Panel at 69-70.]

A. No. Every service that Verizon VA connects at a CLEC's request will, one day, be disconnected. The cause of the disconnection cost will be the CLEC's decision to request that Verizon VA connect the service in the first instance. Thus, AT&T/WorldCom are once again attempting to define "causation" in an inappropriately narrow way solely to evade their responsibility to compensate Verizon VA for the costs they cause to be incurred.

Q. Does Verizon VA's collection of disconnect costs at the time of connection raise "needless 'time value of money' issues," as AT&T/WorldCom allege? [AT&T/WorldCom NRC Rebuttal Panel at 70.]

A. No. As described in Verizon VA's initial NRC panel testimony,[64/] disconnect costs are discounted for the time value of money, based on a 2.5-year forecasted service life and a 12.95% cost of capital. Because, in Verizon VA's experience 2.5 years is the average UNE lifetime, these adjustments ensure that Verizon VA does not over-recover in collecting disconnect costs. Moreover, because disconnect costs are modified to ensure that they are forward-looking, CLECs pay only the costs that will prevail in the future, rather than the disconnect costs that prevail today.

Q. Is it true that "[w]hen a new entrant serves an end user using either total service resale or combined unbundled network elements, there would be no physical disconnection of facilities required when the new entrant ceased to use those facilities," and that a disconnect charge at connection is therefore inappropriate? [AT&T/WorldCom NRC Rebuttal Panel at 72.]

A. No. Verizon VA imposes a disconnection charge when an end user connects a service. If the end user then migrates to a CLEC, Verizon VA does *not* impose any disconnect cost on the end user or the CLEC for disconnection of the end user's retail service, because Verizon VA already has recovered those costs from the end user at the time of initial connection. The disconnect portion of charges for the migration cover the ultimate disconnect costs for the *new* wholesale product being provisioned via the migration to

64/ VZ-VA Panel Direct at 335.

fulfill the CLEC order. Therefore, AT&T/WorldCom's professed concern that an end user would be charged twice for disconnection[65/] is misplaced.

IX. xDSL ISSUES (JDPL Issues II-1 to II-1-d; II-2 to II-2-d; IV-36)

A. Verizon VA's Line Sharing Costs are Appropriate.

Q. Please summarize this section of the testimony.

A. This section of the testimony responds to AT&T/WorldCom's criticisms of Verizon VA's proposed costs related to line sharing arrangements.[66/] AT&T/WorldCom's contentions are flawed for the following reasons:

- AT&T/WorldCom misunderstand (or refuse to acknowledge) that wideband testing plays an important role in ensuring high quality xDSL service to all end users. The CLECs should bear the costs associated with this system, and should not be permitted to opt out of it, as AT&T/WorldCom propose. Permitting the CLECs to do so would decrease service quality and increase costs to those CLECs that choose WTS. Finally, Verizon VA's WTS costs were ***not*** incurred as a result of Verizon VA's retail systems. Rather, they were incurred on behalf of CLECs.

- Verizon VA's line sharing OSS costs are fully explained in Verizon VA's cost studies and are supported by the record. Rather than point to any specific area in which Verizon VA's presentation of its cost study and supporting materials is deficient, AT&T/WorldCom merely assert that the information is "insufficient." AT&T/WorldCom's baseless attacks should be dismissed.

- Verizon VA's line sharing OSS costs should not be recovered in Verizon VA's ACFs. These costs are incurred as a direct result of providing a UNE to the CLECs, and therefore the CLECs should bear these costs. Spreading these costs to all services, as AT&T/WorldCom propose, would be inappropriate and would result in an improper subsidy to AT&T/WorldCom.

- Verizon VA is not double recovering line sharing OSS costs. These costs are not included in Verizon VA's cost factors, which are applied to all services.

65/ AT&T/WorldCom Rebuttal Panel at 72.

66/ These line sharing-related costs include costs associated with the wideband testing system, line sharing OSS, splitter costs, and cooperative testing.

- AT&T/WorldCom's assumption that line sharing splitters are placed on Verizon VA's MDF is unrealistic, ignores the practical consequences of such a configuration, and is inconsistent with FCC requirements.

- Verizon VA's splitter costs are reasonable. Verizon VA appropriately applied an EF&I factor for splitter installation costs consistent with well-accepted costing methodology. Verizon VA has confirmed these costs with independent vendor invoices. AT&T/WorldCom provide no evidence that these costs are inflated.

- Contrary to AT&T/WorldCom's claims, it is entirely appropriate to recover administration and support expenses, even when the CLEC owns the splitter. Verizon VA incurs these general expenses for *all* UNEs. There is no reason that a CLEC who chooses to own the splitter should avoid these costs.

- Finally, Verizon VA's cooperative testing charges are appropriate. Verizon incurs these costs only when a CLEC asks Verizon VA to perform this testing. There is no reason to provide the CLECs this testing — which is above and beyond normal testing — free of charge.

1. Wideband Testing System Costs

Q. AT&T/WorldCom contend that Verizon VA should not be permitted to recover Wideband Testing System (WTS) costs from CLECs. [AT&T/WorldCom NRC Rebuttal Panel at 104.] Why is such recovery appropriate?

A. AT&T/WorldCom ignore the fact that testing is necessary in the wholesale arena. Because wideband testing is critical for the provisioning and maintenance of xDSL-compatible loops, the associated costs are properly recovered from CLECs that order those loops.[67/]

Q. Why is wideband testing necessary for wholesale services?

A. Wideband testing is necessary to provide a quality wholesale product — a fully functional xDSL-compatible loop — at its initial provisioning turn-up to the CLEC.

[67/] Verizon VA explained the purpose of wideband testing in more detail in the VZ-VA Panel Direct at 150-52.

Layer 1 of such testing, which is the type that Verizon VA has implemented for wholesale services, provides the ability to remotely test the physical characteristics of a copper loop facility and to see if "the pair" (the two copper wires making up the loop facility) is good, balanced, and free of metallic defects and impairments such as shorts, grounds and foreign voltages. With respect to xDSL, this testing permits the user to see spectrum characteristics or noise issues from interferors (other high-speed digital services in the same cable) because of unique designs.

Layer 2 and above testing involves the communication between the end user's modem and the CLEC's DSLAM and/or ISP provider. CLECs can use many tools that vary by technology and vendor to accomplish Layer 2 testing. Verizon VA has not included Layer 2 test equipment or costs in its WTS cost study.

Without Verizon VA's wideband testing capability, trouble sectionalization, isolation, and repair on dedicated and shared xDSL lines would require multiple dispatches of service technicians to central offices and customers' premises. As a result, Verizon VA would incur (and to a significant extent would pass on to CLECs through dispatch charges) even greater costs that could be avoided through the use of an effective Layer 1 wideband test system.

Finally, wideband testing at Layer 1 permits Verizon VA to provide quality wholesale services. It is fundamentally unfair for AT&T/WorldCom to seek to hold

Verizon VA to high wholesale service standards, while refusing to contribute to the cost of achieving such standards.

Q. Should wideband testing be made optional, as AT&T/WorldCom propose? [AT&T/WorldCom NRC Rebuttal Panel at 112.]

A. No. Verizon VA's wideband testing capabilities contribute to improved provisioning and repair to all CLECs by allowing Verizon VA to build the capabilities of wideband testing directly into its operational processes. Allowing some CLECs to "opt out" of wideband testing would be just as inappropriate as allowing some CLECs to continue to submit orders manually while others used Verizon VA's ordering GUI.

In addition to the service quality issues that would result if a CLEC refused wideband testing, the monthly cost per line assessed on those CLECs that did choose wideband testing would increase considerably, because the wideband testing costs would be spread over fewer xDSL lines. Assuming that half the CLECs were to request this service, the rate would increase to approximately $3.00 per month. If only a quarter of the CLECs were to purchase the optional service, the rate would increase to approximately $5.00. As a result, those CLECs that want to ensure good service for their customers would be paying a much higher rate.

Q. Why can't CLECs do Layer 1 testing on their own?

A. CLECs are free to do their own Layer 1 testing, but Verizon VA still must perform its own Layer 1 testing before it provisions the loop to ensure the loop is functioning free of

spectrum or noise problems. Even if a CLEC conducted Layer 1 testing and offered Verizon VA the results, that could not occur until after Verizon had provisioned the loop — too late to serve the very purpose for which Verizon VA does this testing. Layer 1 testing also reduces future maintenance expenses.

Q. AT&T/WorldCom contend that Verizon VA has not substantiated its claim of cost savings associated with wideband testing, citing comments by Verizon witness White for support. [AT&T/WorldCom NRC Rebuttal Panel at 109-10.] How do you respond?

A. AT&T/WorldCom's citation of Mr. White's comment is misleading and taken out of context. Mr. White explained that *without* the WTS system, Verizon VA and CLECs would incur excessive costs for needless dispatches — by both AT&T and Verizon VA technicians — and recurrent and unresolved service problems. Therefore, dispatches (with the associated non-recurring costs) would be more frequent, and Verizon VA would have to spend additional time and resources identifying and resolving problems — for which not all of the costs would be captured in recurring charges. Simply put, wideband testing is the most efficient way to test the high frequency portion of the loop. If Verizon VA were to price xDSL-compatible loops without such testing, the costs would be higher, not lower.

Q. Are AT&T/WorldCom correct that the WTS was intended for Verizon VA's retail services, and that it is therefore not appropriate to charge the CLECs for this testing? [AT&T/WorldCom NRC Rebuttal Panel at 108-09.]

A. No. AT&T/WorldCom are mistaken. It is true that before Verizon VA established a separate advanced services affiliate, it looked at developing a WTS. But AT&T/WorldCom ignore the fact that there are two pieces to wideband testing — Layer 1, which involves the physical layer; and Layer 2 and above, which test the transmission and the protocol layers. Verizon VA is installing Layer 1 testing for its wholesale services. Verizon's affiliate, Verizon Advanced Data, Inc. (VADI), purchased similar testing equipment to perform Layer 2 and 3 tests for its own offerings.

AT&T/WorldCom cite a refund from Alcatel as support for their argument that Verizon VA's WTS charge is inefficient and a cover for a supplier error.[68/] But the Alcatel refund was related to *Layer 2* testing, *not* Layer 1. Alcatel failed to build into the DSLAM the necessary functionality for Layer 2. Verizon VA does not provide DSLAMs to CLECs, and does not charge CLECs for testing of Layer 2 or above. Thus, Alcatel's failure to deliver the appropriate DSLAMs was relevant only to VADI's ability to perform advanced testing.

68/ *See* AT&T/WorldCom NRC Rebuttal Panel 112-14.

Q. Please respond to AT&T/WorldCom's claim that CLECs should have to pay only if they choose to use WTS and only if Verizon VA provides "full access" to the WTS system. [AT&T/WorldCom NRC Rebuttal Panel at 105.]

A. As explained above, wideband testing is critical to Verizon VA's ability to provision quality xDSL-compatible loops. It is more reasonable to recover the costs of this system, which benefits all CLECs that purchase such loops, from all such CLECs than to burden a subset of those CLECs with substantially higher rates.

Direct access to the WTS is not required because Verizon VA provides to CLECs, upon request, the same test results that Verizon VA's wholesale technicians use. There is no reason to require Verizon VA to give any CLEC direct control over Verizon VA's test equipment. Indeed, Verizon VA does not turn over other kinds of network testing, maintenance and repair equipment to CLECs, yet it is undisputed that the cost of such equipment is a legitimate and recoverable cost of providing wholesale service. CLECs are the ultimate beneficiaries of the deployment of any equipment that improves the quality or efficiency of Verizon VA's wholesale service offerings. The WTS clearly meets that standard.

WTS costs are incremental costs that Verizon VA would not incur absent the requirement to offer line sharing, line splitting and stand-alone xDSL loops, and Verizon VA must be allowed to recover these costs.

Q. AT&T/WorldCom argue that WTS costs should be treated like other testing costs and placed in expense loadings. [AT&T/WorldCom NRC Rebuttal Panel at 110.] Why should WTS costs be treated differently?

A. Including WTS costs in expense loadings would be improper because costs that are incurred only in connection with xDSL services would then be spread over all products and services. This would constitute an inappropriate subsidy by basic telecommunications users — that is, voice customers — to users of advanced services.

Specifically, expense factors reflect expenses divided by investment. This means that $10 million of expense divided by $100 million of investment produces a factor of 0.10, which is applied to the unit investment in a cost study. Thus, for every $1.00 of investment, an expense factor of 0.10 produces an annual expense of $0.10. Adding WTS costs to the numerator of the expense factor development, as AT&T/WorldCom propose, would spread these costs over all products and services instead of just the cost-causing xDSL services. All purchasers of POTS loops would therefore pay for testing that is unique to xDSL-compatible loops.

Moreover, because Verizon VA is not proposing at this time to allocate investments in the underlying loop to line sharing CLECs, it is likely that little or no WTS costs would be recovered from the cost-causing line sharing CLEC if this method were used — most or all of the costs would be recovered from other service providers.

2. Line Sharing OSS Costs

Q. AT&T/WorldCom contend that Verizon VA has not provided enough information to evaluate whether its line sharing OSS costs are appropriate. [AT&T/WorldCom NRC Rebuttal Panel at 115.] How do you respond?

A. AT&T/WorldCom apparently have not taken the time to review Verizon VA's testimony or cost studies. Verizon VA discussed the software and work provided by Telcordia, as well as enhancements to Verizon VA's OSS related to line sharing, in its direct testimony.[69/] Verizon VA also filed a cost study specific to line sharing OSS-related costs on July 2, 2001, in VZ-VA CS, Vol. IV, Part B-17, Section 2.1. Additionally, AT&T/WorldCom requested and Verizon VA produced the Telcordia contract for the software and work effort provided by Telcordia.[70/]

As Verizon VA's cost study explains, line sharing OSS costs were divided into three categories: (1) those to be shared between line sharing and line splitting; (2) those to be shared among line sharing, line splitting, and subloop unbundling; and (3) those related to internal ordering and billing OSS that are shared by line splitting and line sharing. The first two categories of expenditures were capitalized; the third was assumed to be 60% capital and 40% expense. The capitalized expenditures were multiplied by the capital portion of the ACF that assumes a five-year asset life for the software. As with Access to OSS costs, Verizon VA applied a 15% factor to the initial investment to derive

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69/ *See* VZ-VA Panel Direct at 147-150.

70/ *See* Verizon VA's Response to AT&T/WCOM Request 6-75 (attached hereto at Attachment B).

an estimated annual software maintenance cost.[71] Verizon VA then added the capital related annual cost to the annual OSS maintenance cost to develop an annual cost. That cost was divided by the five-year forecast for each of the three defined categories to develop a monthly per-line cost, to which the common overhead and gross revenue loading factors were then applied.[72]

The cost study also provides the cost calculations, supporting data, and assumptions. Verizon VA, for example, has produced the Telcordia contract and the underlying xDSL demand forecast.[73]

Rather than point to any specific area in which Verizon VA's presentation of its cost study and supporting materials is deficient, AT&T/WorldCom merely assert that the information is "insufficient."[74] Verizon VA's proposed line sharing OSS costs are fully supported by the record. AT&T/WorldCom's baseless attacks should be dismissed.

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[71] *See* VZ-VA Surrebuttal Panel, Section IX.4.

[72] *See* Verizon VA's Cost Study at VZVA 001659.

[73] *See* Verizon VA's responses to AT&T/WCOM 2-6, 6-71, 6-75 (attached hereto at Attachment B); Verizon VA's Cost Study, filed July 2, 2001, at B-13, Sec. 1, VZVA 001533, 001534, 001535. In addition, a Telcordia work statement provides the cost study back-up for the $21.8 million in expenses for Telcordia work products. *See* Attachment E hereto at 23.

[74] *See* AT&T/WorldCom NRC Rebuttal Panel at 115.

Q. AT&T/WorldCom contend that Verizon VA's levelized demand projection for line sharing and line splitting arrangements differs from the demand projection used to develop WTS costs. [AT&T/WorldCom NRC Rebuttal Panel at 115.] Did Verizon VA use different demand projections?

A. Yes, different projections were used because Verizon VA is applying the costs differently in these two cost studies. Verizon VA proposes that WTS costs be recovered from all CLECs using xDSL-compatible loops, including those in line sharing or line splitting arrangements and those using stand-alone loops. Therefore, Verizon VA used a demand projection that accounted for all xDSL-compatible loops, including stand-alone loops.

On the other hand, line sharing OSS costs, by definition, are related to line sharing and line splitting, but have no connection to stand-alone loops. Thus, in developing line sharing OSS costs, Verizon VA used a projection that did not include stand-alone loops.

Q. In challenging Verizon VA's line sharing OSS costs, AT&T/WorldCom claim that Verizon VA already recovers ongoing line sharing software maintenance through its recurring cost factors, and that the proposed line sharing OSS costs would therefore result in double recovery. AT&T/WorldCom also contend that line-sharing software maintenance costs should be treated as "regular costs of business" and included in recurring cost factors, rather than charged separately. [AT&T/WorldCom NRC Rebuttal Panel at 116.] What is your response?

A. Line sharing OSS maintenance is not recovered in recurring cost factors, nor should it be. Verizon VA recovers OSS costs in three ways: (1) general OSS costs are recovered from all users of Verizon VA's system through annual cost factors; (2) costs associated with *accessing* Verizon' OSS are recovered from all UNE purchasers through UNE costs; and (3) costs associated with specific wholesale-related OSS, such as line sharing OSS, are recovered from the CLECs that are taking advantage of those wholesale-related OSS.

Simply put, it is most appropriate to recover line-sharing software maintenance costs from those CLECs that are using line sharing. Treating those costs as "regular costs of business" and recovering them through recurring cost factors would spread the costs of OSS that are used by a subset of CLECs among all Verizon customers, retail as well as wholesale. It would be unfair to others, generally basic voice service users, who are not using line-sharing to require them to subsidize line-sharing CLECs.

Contrary to AT&T/WorldCom's claims, Verizon VA is not double recovering line sharing OSS costs. Verizon VA makes a specific adjustment to its annual cost

factors to exclude access to OSS costs, thus making double recovery impossible. In any event, no such adjustment is necessary with respect to line-sharing OSS costs because Verizon VA has not yet incurred ongoing line sharing software maintenance costs. Verizon VA therefore cannot possibly be double recovering line sharing OSS costs.

Q. AT&T/WorldCom note that Verizon VA proposes spreading the one-time development costs of line sharing OSS over five years, as opposed to the 10-year recovery period that Verizon VA proposes for Access to OSS development costs. AT&T/WorldCom contends there is "no reason to recover the line sharing costs over a different period of time." [AT&T/WorldCom NRC Rebuttal Panel at 116.] Why are different recovery periods reasonable?

A. Verizon VA proposes a five-year recovery period for line sharing OSS costs because software generally has only a three- to five-year life; therefore, it is appropriate (and common) to recover the associated costs over a five-year period. The only reason Verizon VA chose to spread Access to OSS costs over 10 years was to attempt to mitigate perceived barriers to entry that allegedly might result from recovering the costs over five years. Given the expected life of software, it would have been more consistent with standard cost recovery to spread the costs over five years.

Verizon VA's generous distribution of Access to OSS costs, however, does not suggest that line sharing costs should be treated similarly. First, as noted above, standard cost recovery spreads costs over five years, and Verizon VA's access to OSS proposal is an unusual exception to that principle. Second, variation from the five-year standard

cannot be justified for line sharing OSS, as it can for access to OSS. As explained in our Direct Testimony, xDSL and line sharing have been explicitly designed as interim technologies — they are not intended to be long-term services.[75] Access to OSS, by contrast, will continue to exist as long as there is competition in the local exchange market based on UNEs. Therefore, while recovery of Access to OSS costs is highly likely, even using an unusually long recovery period, the standard five-year period is more likely to recover Verizon VA's costs associated with line sharing OSS.

For these reasons, the Commission should reject AT&T/WorldCom's alternative proposal that Verizon be directed to spread the one-time development costs of line sharing OSS over 10 years.

Q. AT&T/WorldCom also contend that Verizon's estimate of non-recurring costs for line sharing arrangements is unreasonable. (AT&T/WorldCom NRC Rebuttal Panel at 119-22.) How do you respond?

A. Verizon VA's estimate is well-supported and reasonable. First, the service order element, with its associated TISOC tasks, was separately identified in the Line Sharing study, and was empirically shown to be higher than for a new UNE loop.

With respect to central office wiring costs, a line sharing loop is more costly than a new UNE loop because it requires at least twice as many cross-connects as other services. On a conventional MDF, while a new UNE loop requires a cross-connect from

[75] VZ-VA Panel Direct at 122-23.

the cable head (*i.e.*, outside plant cable and pair) to the CLEC's switch, a line sharing loop requires a cross-connect from the cable head to the CLEC's splitter, and from the splitter to Verizon's switch. On a modular COSMIC-like MDF, while a new UNE loop generally requires two jumpers, a line sharing loops requires four jumpers. If anything, Verizon VA has probably understated the costs for a line sharing loop because the cross-connects may be more complicated than wiring for a new UNE loop.

With respect to provisioning and field installation costs, Verizon VA's subject matter experts determined that, if a filed dispatch were required in conjunction with the provision of line sharing, the general activities captured in the field installation non-recurring cost for a new UNE loop would be an appropriate surrogate for line sharing rate elements. (Of course, the field installation charge is imposed only when field installation is actually needed; therefore, if AT&T/WorldCom is correct that a line sharing loop should never require field installation, then CLECs should never incur the charge.)

Though AT&T/WorldCom suggest that the Service Order step for line sharing is simple and should be fully automated,[76/] line sharing orders are in fact among the most complex orders. Verizon VA's line sharing study reflects empirical data showing that currently, Verizon VA handles 39% of line sharing orders manually. Because each line sharing request requires the issuance of two orders — one for the establishment of the service to the CLEC and another for the retail voice service — the Typical Occurrence Factor for line sharing orders doubles to 78%. Assuming improvements in processes and

76/ *See* AT&T/WorldCom NRC Rebuttal Panel at 122.

OSS on a forward-looking basis, Verizon VA reduced this percentage by 53% in its cost studies, resulting in an assumption of a 37% occurrence for non-recurring cost recovery purposes.[77]

While installing line sharing for a CLEC on a Verizon VA retail customer's line is complex in and of itself, making changes to or disconnecting the resulting shared loop is even more cumbersome. With the volume of orders already experienced and expected in the foreseeable future, two customers sharing one piece of inventory, and with the resulting need for two bills, line sharing entails more complex recordkeeping than any other service Verizon VA has ever implemented.

[77] Line sharing involves putting two customers — the retail voice customer and the CLEC — on one loop. The manual work effort involved in establishing the wholesale order for the data portion of the line sharing order requires the TISOC representative to prepare and place into the mechanized system an order with all the required information pertaining to the CLEC and the end user. The wholesale order is a billing order, issued to provide the CLEC and Verizon maintenance organizations with the necessary records. This wholesale (unbundled) service order for a new line sharing arrangement is entered as an "N" or new order and contains the appropriate field identification codes and Uniform Service Order Codes (USOC) reflecting the line sharing arrangement. The TISOC representative also must issue a related order on the end-user's retail service. This order is a non-billing, provisioning-type order to disconnect the existing main frame cross-connection and to place the two new cross connections to the splitter and the CLEC cage. The retail order provides details as to cable assignments to the CLEC splitter and cage and the location of the splitter. The completion date and order number are also included on the retail order.

3. Splitter Costs

Q. Do you agree with AT&T/WorldCom's claim that Verizon should assume that the line sharing splitter is placed at or near the MDF? [AT&T/WorldCom NRC Rebuttal Panel at 122-23.]

A. No. First, this Commission, in its *Line Sharing Order*, specifically recognized the possibility that the splitter would *not* be located within the frame, stating that in such cases "we would expect the states to allow the incumbent LEC to adjust the charge for cross-connecting the competitive LEC's xDSL equipment to the incumbent LECs' facilities to reflect any cost differences arising from the different location of the splitter, compared to the MDF."[78] AT&T/WorldCom's assumption that splitters ***must*** be placed at or near the frame is therefore inappropriate.

Moreover, contrary to AT&T/WorldCom's claims, frame-mounted splitters are not currently workable in a central office environment. In many central offices, it would not be technically feasible to put all CLECs' splitters on the main distributing frame. Given limited capacity at the MDFs, congestion would force Verizon VA to deny space to some CLECs. In addition, adopting frame-mounted splitters as a standard design would preclude Verizon VA from maximizing space and efficiency in its central offices.[79] The frame-mounted splitters may take up to five times more of the amount of

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[78] *Line Sharing Order* at ¶ 145.

[79] Frame-mounted splitters include both splitters and termination capability. While a standard frame block terminates 100 pairs, a frame-mounted splitter terminates only 16 splitter circuits using 48 pairs in the same frame space. A rack-mounted splitter capable of supporting 100 terminations for 96 line share circuits would require two 100-pair frame blocks. In contrast, the same 96 line-shared circuits in a frame-mounted splitter configuration would require six

space that rack-mounted splitters would occupy. The existence of finite amounts of space in central offices, and the existence of numerous conflicting demands for that space, including requests for collocation, is a reality that simply cannot be ignored in a forward-looking study.

Furthermore, the designs worked out in the New York Collaborative have proved to be the most efficient. Some CLECs have elected to place splitters in their collocation cages; indeed, in the New York Collaborative, data CLECs preferred such placement.[80/]

The frame mounting of all splitters would also require the attachment of duplicative equipment to multiple frames, resulting in unnecessary wiring and lower equipment utilization, all of which would reduce efficiency. It is unreasonable to require that Verizon VA adopt such inefficiency, or simply to assume that it does not exist for costing purposes.

Finally, we note that Verizon VA's policy is to locate splitters as close to the frame as possible, consistent with space availability constraints and the central office space requirements of all uses of the network.

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frame-mounted splitter blocks in addition to one frame block for the DSLAM equipment appearance. As a result, the main distributing frame in a central office would need to have approximately 50% spare capacity to support line sharing for 15% of the existing loops. The addition of testing equipment would further complicate the design and increase overall frame space requirements.

80/ *See* Opinion and Order Concerning Verizon's Wholesale Provision of DSL Capabilities, *Proceeding on Motion of the Commission to Examine Issues Concerning the Provision of Digital Subscriber Line Services*, Case 00-C-0127, Op. No. 00-12, at 19 (N.Y. Pub. Serv. Comm. Oct. 31, 2000).

Q. AT&T/WorldCom object to Verizon VA's application of an EF&I factor for Digital Circuit Equipment to calculate installation costs, arguing that splitters and shelves are "simple and passive devices." [AT&T/WorldCom NRC Rebuttal Panel at 125.] Why is Verizon VA's EF&I factor appropriate?

A. First, AT&T/WorldCom incorrectly assume that EF&I costs are limited to physical installation work. Their repeated portrayal of the installation effort as being limited to the simple placement of a shelf on a relay rack and the sliding in of line cards is a blatant misrepresentation of the myriad work activities required. However, there are other significant costs included in this factor that AT&T/WorldCom ignore and which Verizon VA should be permitted to recover. For example, as we explained in our Direct Testimony,[81/] Verizon VA's EF&I costs include not only physical installation of equipment, but planning and engineering of the installation job and testing of the installed equipment.[82/] The EF&I factor is used to provide an identification of the final in-place cost incurred to make an item of plant investment ready for service.

81/ *See* VZ-VA Panel Direct at 158.

82/ In fact, to the extent that the hardware is less expensive than some other types of equipment included in development of the factor, and the engineering, testing, and inventory work involved is more costly, the factor method likely *understates* these costs. If the factor was developed based on equipment for which hardware is a larger component of the total cost, then the engineering, testing and inventory work would be a proportionally smaller part of the whole. For example, if a factor of 40% were applied to equipment that has a $1000 hardware cost, then $400 would be allocated to engineering, testing and inventory work. If the hardware cost only $100, however, that same factor would allot only $40 to such work. Therefore, for equipment that involves inexpensive hardware and substantial engineering, testing and inventory work, the EF&I factor probably understates the true costs.

The use of an EF&I factor for Digital Circuit Equipment is appropriate. Verizon's Accounting Classification organization categorizes equipment in families for purposes of tracking expenses and investments, based on, *inter alia*, similarities in service life and functionalities performed. The Digital Circuit Equipment (or the pair gain equipment account) family includes electrical equipment that can provide multiple loops; thus, splitters are grouped in that equipment account because they serve more than one circuit. Like splitters, other types of equipment in this same category lack power and are "passive" devices as described by AT&T/WorldCom.

Importantly, CLECs always have the option to install their own splitters. If CLECs think they can get a better deal from a vendor, they are certainly welcome to do so, and they will not have to pay Verizon VA to perform the installation for them. When Verizon VA installs splitters on behalf of CLEC, however, the CLEC should pay the proposed rate.

Q. Please respond to AT&T/WorldCom's contention that Verizon VA could have used average labor times, as it did in its NRC cost study, as the basis for splitter installation costs. [AT&T/WorldCom NRC Rebuttal Panel at 129.]

A. The factor method is particularly appropriate here because numerous activities and organizations are involved in engineering, furnishing and installing splitters. This method is well-established; Verizon VA does not conduct non-recurring cost studies for all the types of plant equipment for which the EF&I factor is used. In fact, the application of an EF&I expense factor to its related material price, in order to identify an

estimate of those expenses, has been a universally accepted approach throughout the industry for at least a quarter of a century. Indeed, the factor method is particularly preferable since Verizon VA does not yet have a significant amount of experience with installing splitters on which to base a non-recurring study, as AT&T/WorldCom here propose.

Moreover, as we explained in our direct testimony,[83] Verizon VA's splitter installation cost of $1,482 was validated by quotes from two vendors. Teletech and Orius gave quotes of $1,164 and $1,044, respectively, solely for the vendor's portion of the installation effort, not including Verizon VA's engineering- and installation-related costs.[84]

Q. AT&T/WorldCom argue that the Administrative & Support charge should not be applied when the splitter is owned and maintained by the CLEC (Option A). [AT&T/WorldCom NRC Rebuttal Panel at 130.] Why is it appropriate to apply the charge to CLEC-owned splitters?

A. It is appropriate because the splitters become a part of the network and require Verizon VA to undertake administrative and support activities in connection with the equipment's interaction in the network.

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[83] *See* VZ-VA Panel Direct at 158.

[84] *See* VZ-VA Response to AT&T/WCOM 6-62 (attached hereto at Attachment B) AT&T/WorldCom have produced no contradictory evidence. Indeed, AT&T has conceded that it "has not installed or purchased any splitters in Virginia." AT&T Response to VZ-VA 2-10 (attached hereto at Attachment F). Despite a request by Verizon VA, AT&T/WorldCom did not produce any information on charges that they pay to carriers or vendors in any other jurisdiction. *See* AT&T/WorldCom Response to VZ-VA XIII-107 (attached hereto at Attachment F).

Q. What costs are recovered by the A&S charge proposed for Option A?

A. Administrative/wholesale marketing costs and other support expenses are recovered in the A&S charge, which was developed by applying the ACFs (*i.e.*, Network, Other Support, and Wholesale Marketing) to the total installed investment.

Q. Why is the recovery of wholesale marketing expenses appropriate in Option A? [AT&T/WorldCom NRC Rebuttal Panel at 130-32.]

A. The wholesale marketing ACF recovers the expenses associated with wholesale product management and customer interfacing functions. Verizon VA has an entire department dedicated to CLECs. This organization designs and develops products, defines system requirements, works with CLECs to find out what they need in terms of product and structure, and, upon completion of a new product, explains the product to the CLECs. In addition, the marketing group negotiates contracts and interconnection agreements with CLECs, develops and updates the CLEC handbook to give them access to the kinds of information they need, runs workshops for CLECs, trains internal customer-facing groups, and generally interfaces with CLECs to answer questions and resolve problems. All of these marketing department functions are captured in this factor.

CLECs that choose Option A serving arrangements use and benefit from these wholesale marketing functions, and cause Verizon VA to incur the underlying costs, to the same extent as CLECs that choose Option C. There is no reason why Option A CLECs should not bear a fair share of the cost of this activity. The cost recovery

mechanism for line sharing should, ideally, be as neutral as possible between Options A and C.

Q. What are "other support" expenses?

A. "Other support" includes support expenses for information management, research and development, procurement, and capital costs associated with non-revenue producing investments in motor vehicles, special work equipment, land and buildings (excluding central office buildings), general-purpose computers, furniture, and official communications and support equipment. These costs are incurred to support all classes of plant and are attributed to all revenue-producing investment categories.

In short, like the wholesale marketing expenses discussed above, there is no reason why Option A CLECs should be uniquely exempt from these charges, since they cause the underlying costs to precisely the same extent as Option C CLECs.

Q. Please respond to AT&T/WorldCom's contention that Verizon VA's splitter charges are duplicative of collocation charges. [AT&T/WorldCom NRC Rebuttal Panel at 131-32.]

A. AT&T/WorldCom are wrong. The placement of a splitter in Verizon VA's network involves many costs that are not captured in collocation charges, including inventory work and testing specific to splitters.

For instance, in the case of line sharing, Verizon VA's POTS loop goes into the CLEC's splitter and back out; therefore, Verizon VA must perform testing and other coordination activities with the CLEC in connection with Verizon VA's own voice service. Those activities and associated costs are above and beyond any activities or costs related to the CLEC's collocation arrangement.

Furthermore, AT&T/WorldCom have offered no proof that these costs are included in any collocation charge assessed on CLECs in Virginia.[85/]

Q. With respect to Option C, AT&T/WorldCom contend that the use of the EF&I factor to develop the "admin & support" cost is inappropriate because a splitter has no active electronic components, and requires only an hour of maintenance per year [AT&T/WorldCom NRC Rebuttal Panel at 135.] How do you respond?

A. AT&T/WorldCom's contentions are pure fantasy. AT&T/WorldCom offer no basis for their position other than the assertion that the splitter "is a passive device." They apparently assume that outside of a catastrophic event no maintenance would ever be required on a splitter, and that one hour a year would in any case be sufficient to deal with the consequences of such an event.

85/ Verizon, AT&T and WorldCom reached a settlement on all collocation charges in Virginia. The Settlement Agreement was filed with the Virginia State Corporation Commission on December 20, 2000. The splitter costs were not included in that Settlement Agreement. Nor were these costs even included in the collocation model filed by WorldCom in the Virginia collocation proceeding.

Generally, splitter maintenance will involve three separate functions. The first is actual replacement of the splitter card when necessary. The central office technician, at the request of the CLEC, must locate the proper splitter card, remove it, and then replace the card (using a spare previously provided by the CLEC). The suspected defective card must be tagged, packaged, and returned to the CLEC. The CLEC must then provide a new spare card. When the technician receives the new spare, it is placed in the appropriate storage facility.

The second function is joint testing of the splitter card. (Note that the proposed WTS charge does not recover the cost of such testing, only the cost of the WTS equipment.) In many cases a splitter card will be replaced only temporarily with a known good card (from storage). The CLEC can then remotely verify that the splitter card is functioning and if the fail condition persists, the original card could be replaced and the spare card returned to storage.

Finally, there is paperwork associated with the maintenance and return of the potentially defective splitter card: the splitter card must be marked, tagged, and returned to the CLEC. The central office technician must close out the trouble ticket associated with the CLEC splitter card trouble report.

4. Cooperative Testing

Q. Do you agree with AT&T/WorldCom's claim that cooperative testing should not apply to line sharing because line sharing uses an existing, working line that has already been tested? [AT&T/WorldCom NRC Rebuttal Panel at 141.]

A. No. AT&T/WorldCom miss the point. Verizon VA performs cooperative testing on a line sharing line only *upon request from a CLEC*. This is above and beyond the normal testing in conjunction with provisioning. It often involves time spent by a Verizon technician, working at the direction of the CLEC. This Verizon technician is in effect the "hands" for the CLEC tester (creating various conditions on the loop to facilitate testing), thus eliminating the need for the CLEC to dispatch its own technician. Verizon is providing a quality service that results in substantial savings to the requesting CLEC. The requesting CLEC is the beneficiary of the service and should therefore pay for the cost.

With respect to stand-alone xDSL-compatible loops, CLECs that choose to put testing capability on the loops themselves do not incur the cooperative testing charge; with the proper CLEC equipment, testing can be done without the need for the cooperative effort. But CLECs that choose methods that require Verizon VA to provide cooperative testing should be required to pay Verizon VA for its effort. Otherwise, Verizon VA would effectively be penalized for a CLEC's business decision, sending out incorrect market signals.

Q. How do you respond to AT&T/WorldCom's allegation that Verizon VA seeks to force CLECs to bear the costs of Verizon VA's own inefficiencies? [AT&T/WorldCom NRC Rebuttal Panel at 139.]

A. Their contention makes no sense. They demand that Verizon VA provide xDSL-compatible loops that meet certain performance requirements, yet they are not willing to pay for the testing that Verizon VA must undertake to assess performance and detect any problems. If a CLEC believes that Verizon VA's testing charge is inappropriate, the CLEC is free to build appropriate testing capability on its own loop and avoid the cooperative testing charge.

Q. How do you respond to AT&T/WorldCom's contention that Verizon VA's cooperative testing charge is overstated? [AT&T/WorldCom NRC Rebuttal Panel at 141-42.]

A. AT&T/WorldCom oversimplify the testing process. Cooperative testing is a careful, repetitive diagnostic process, with the aim of keeping the customer in service. It is not simply a matter of verifying dial tone. The technician must check the dial tone several times in the course of the provisioning process, and must do so at all cross-connection points (*e.g.*, at the switch cross-connect, at the cross-connects in and out of the splitter, at the termination at the MDF, and the cross-connect to the outside plant).